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Before the
FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)

Federal-State Joint Board on)
Universal Service)

CC Docket No. 96-45

REPLY COMMENTS OF THE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

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January 10, 1997

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Summary	i
I. INTRODUCTION	1
II. NTIA SUPPORTS THE JOINT BOARD'S PROPOSED DEFINITION OF THE FEDERAL UNIVERSAL SERVICE PACKAGE	4
III. FORWARD-LOOKING COSTS OUGHT TO BE THE BASIS FOR IDENTIFYING ANY AREA AS "HIGH COST" AND AN AREA SHOULD BE CLASSIFIED AS HIGH COST BY COMPARING THE COSTS OF SERVING THAT AREA WITH A NATIONWIDE AVERAGE COST BENCHMARK	6
IV. CONTRIBUTIONS TO THE FEDERAL UNIVERSAL SERVICE FUND SHOULD BE BASED ON A FIRM'S COMBINED INTERSTATE AND INTRASTATE REVENUES	10
V. THE JOINT BOARD'S RECOMMENDATIONS PROVIDE A FRAMEWORK FOR ENSURING THAT OUR NATION'S SCHOOLS, LIBRARIES, AND RURAL HEALTH CARE PROVIDERS ARE ABLE TO HAVE AFFORDABLE ACCESS TO INFORMATION TECHNOLOGY	15
A. Schools and Libraries	15
1. Technology and curriculum should be integrated	16
2. Educational access to technology should be prudently supported and periodically reviewed	19
3. Schools and libraries must receive technical and informational assistance to ensure their successful participation in the new universal service support system	19
4. State regulators should have primary responsibility for identifying similarly situated schools and libraries	22
5. The Recommended Decision's discount rate structure for the most disadvantaged schools should be revised to reflect better their area cost situations	24
6. A sound basis for discounting rates must be developed for libraries and private schools	25

7.	The Commission must address the applicability of discounted rates and other aspects of the new universal service policy with respect to this nation's tribes	26
8.	The Joint Board's recommended level of support is not unreasonable	27
9.	The Recommended Decision's current trigger point for giving priorities to the most disadvantaged schools and libraries should be lowered	28
10.	Non-toll Internet access for rural or insular schools or libraries should be explored . . .	29
B.	Health Care Providers	30
VI.	CONCLUSION	33
APPENDIX: Survey of Rural Telemedicine TIIAP Grantees		

SUMMARY

NTIA commends the Joint Board for its work in developing the new universal service policies mandated by the Telecommunications Act of 1996 (1996 Act). The Recommended Decision is a testament to the spirit of collaboration and cooperation between Federal and State regulators in addressing the many difficult issues encompassed within universal service. NTIA believes that the Joint Board's recommendations chart a course that will bring the nation closer to achieving its fundamental universal service goal -- ensuring that all Americans have access to essential telecommunications service at affordable rates.

The ultimate measure of those policies, however, is their success in maintaining and, indeed, increasing telephone subscribership. That is, after all, the most direct way of determining whether policies aimed at promoting affordable telephone rates have hit their mark. In NTIA's comments in the Commission's proceeding on telephone subscribership, we urged the Commission to establish a National Subscribership Goal: By December 31, 2000, in each State, the average level of telephone penetration among households meeting certain designated demographic and geographic characteristics should be no less than the nationwide average that existed as of November 1996. If that goal is not achieved, the universal service review currently scheduled for January 1, 2001 should focus on ways to amend the universal service policies adopted in this proceeding so as to achieve promptly the National Subscribership Goal.

Although NTIA supports the broad outlines and many specific provisions of the Recommended Decision, we nevertheless offer some suggested modifications in several areas:

- First, NTIA supports the Joint Board's proposed definition of the Federal universal service package. We also urge the Commission to adopt the Board's recommendations that universal service support be made available for the provision of toll blocking and toll limitation service to low-income customers and that carriers be barred from disconnecting the local telephone service of low-income subscribers for nonpayment of long distance charges. Further, we agree that some support should be given to single line business customers in high cost areas.
- Second, the size of universal service subsidies in high cost areas should be determined by comparing the costs of providing the Federally-defined universal service package in those areas (with the costs developed by a mechanism beyond the control of the serving firms) to the average costs of providing the same set of services throughout the rest of the country. NTIA believes that this approach is both fairer and more consistent with the 1996 Act than the approach proposed in the Recommended Decision, which would equate high cost support to the difference between the costs of serving an area and a nationwide average revenue benchmark.
- Third, NTIA recommends that all providers of interstate telecommunications services should be required to contribute to the funding of universal service based on their combined gross revenues -- intrastate and interstate alike -- less payments made for telecommunications services received from other companies who also pay monies into the Federal universal service fund. Using combined revenues (rather than, for example, interstate revenues alone) is consistent with congressional intent and ensures that the burdens of supporting the nationwide universal service package mandated by the 1996 Act are borne equitably by all telecommunications service providers and their customers.
- Fourth, NTIA offers a number of refinements to the Joint Board's recommended mechanisms for providing essential services to the nation's schools and libraries. Most prominently:

- While it would be appropriate, in non-competitive situations, to base rates for discounted services to schools and libraries on the lowest price charged to "similarly-situated non-residential customers, State regulators ought to determine which customers are similarly-situated.
- The Board's proposed trigger point for giving priority to the most disadvantaged schools and libraries should be lowered.
- Non-toll Internet access for rural or insular schools and libraries should be explored.
- Finally, NTIA offers an analysis of data from grantees in our Telecommunications Information Infrastructure Applications Program (TIIAP) to assist the Commission and the Joint Board in their deliberations on universal service support for rural health care providers.

In the Matter of)
)
Federal-State Joint Board on) CC Docket No. 96-45
Universal Service)

The National Telecommunications and Information Administration (NTIA), an Executive Branch agency within the Department of Commerce, is the President's principal advisor on domestic and international telecommunications and information policy. NTIA respectfully replies to comments submitted in response to the Recommended Decision of the Federal-State Joint Board (Joint Board) in the above-captioned proceeding.^{1/}

NTIA commends the Joint Board for its work in developing the new universal service policies mandated by the Telecommunications Act of 1996 (1996 Act).^{2/} The Recommended Decision is a testament to the spirit of collaboration and cooperation between

2/ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified at 47 U.S.C. §§ 151 et seq.) (hereinafter 1996 Act). For convenience, all references to the 1996 Act in this pleading will cite to the section numbers that will apply after the Act's provisions have been codified in the United States Code.

Federal and State regulators in addressing the many difficult issues encompassed within universal service. NTIA believes that the Joint Board's recommendations chart a course that will bring the nation closer to achieving its fundamental universal service goal -- ensuring that all Americans have access to essential telecommunications service at affordable rates.

The ultimate measure of those policies, however, is their success in maintaining and, indeed, increasing telephone subscribership. That is, after all, the most direct way of determining whether policies aimed at promoting affordable telephone rates have hit their mark. In NTIA's comments in the Commission's proceeding on telephone subscribership, we urged the Commission to establish a National Subscribership Goal: By December 31, 2000, in each State, the average level of telephone penetration among households meeting certain designated demographic and geographic characteristics should be no less than the nationwide average that existed as of November 1996.^{3/} If that goal is not achieved, the universal service review currently scheduled for January 1, 2001 should focus on ways to amend the universal service policies adopted in this proceeding so as to achieve promptly the National Subscribership Goal.^{4/}

3/ Reply Comments of the National Telecommunications and Information Administration, Amendment of The Commission's Rules and Regulation To Increase Subscribership and Usage of the Public Switched Network, CC Docket No. 95-115, at 7 (filed Mar. 29, 1996).

4/ See Recommended Decision ¶ 110.

Although NTIA supports the broad outlines and many specific provisions of the Recommended Decision, we nevertheless offer some suggested modifications in several areas:

- First, NTIA supports the Joint Board's proposed definition of the Federal universal service package. We also urge the Commission to adopt the Board's recommendations that universal service support be made available for the provision of toll blocking and toll limitation service to low-income customers and that carriers be barred from disconnecting the local telephone service of low-income subscribers for nonpayment of long distance charges. Further, we agree that some support should be given to single line business customers in high cost areas.^{5/}
- Second, the size of universal service subsidies in high cost areas should be determined by comparing the costs of providing the Federally-defined universal service package in those areas (with the costs developed by a mechanism beyond the control of the serving firms) to the average costs of providing the same set of services throughout the rest of the country.^{6/} NTIA believes that this approach is both fairer and more consistent with the 1996 Act than the approach proposed in the Recommended Decision, which would equate high cost support to the difference between the costs of serving an area and a nationwide average revenue benchmark.^{7/}
- Third, NTIA recommends that all providers of interstate telecommunications services should be required to contribute to the funding of universal service based on their combined gross revenues -- intrastate and interstate alike -- less payments made for telecommunications services received from other companies who also pay monies into the Federal universal service fund. Using combined revenues (rather than, for example, interstate revenues alone) is consistent with congressional intent and ensures that the burdens of supporting the nationwide universal service package mandated

5/ Id. ¶¶ 91-92.

6/ The Commission should continue to explore the feasibility of using competitive bidding to determine the appropriate level of universal service support in high cost areas.

7/ See Recommended Decision ¶¶ 311-313.

by the 1996 Act are borne equitably by all telecommunications service providers and their customers.

- Fourth, NTIA offers a number of refinements to the Joint Board's recommended mechanisms for providing essential services to the nation's schools and libraries. Most prominently:
 - While it would be appropriate, in non-competitive situations, to base rates for discounted services to schools and libraries on the lowest price charged to "similarly-situated non-residential customers, State regulators ought to determine which customers are similarly-situated.
 - The Board's proposed trigger point for giving priority to the most disadvantaged schools and libraries should be lowered.
 - Non-toll Internet access for rural or insular schools and libraries should be explored.
- Finally, NTIA offers an analysis of data from grantees in our Telecommunications Information Infrastructure Applications Program (TIIAP) to assist the Commission and the Joint Board in their deliberations on universal service support for rural health care providers.

II. NTIA SUPPORTS THE JOINT BOARD'S PROPOSED DEFINITION OF THE FEDERAL UNIVERSAL SERVICE PACKAGE

NTIA strongly supports the Joint Board's tentative definition of the package of services that should be made available to all Americans -- voice grade access to the public switched network with the ability to place and receive calls; touch-tone; single party service; and access to emergency services, operator services, interexchange service, and directory assistance.^{8/} These capabilities satisfy the criteria enumerated in the 1996 Act for determining which services and

^{8/} See *id.* ¶ 4.

features should be included within the Federal universal service package.^{9/} As importantly, their availability will allow subscribers to make a full range of voice telephone calls and to access the Internet and other information networks.^{10/} Furthermore, as NTIA has consistently argued, this definition must be dynamic and should therefore be reviewed regularly to keep pace with changing technology and customer demand.^{11/}

We also urge the Commission to adopt the Board's recommendations that universal service support be made available for the provision of toll blocking and toll limitation service to low-income customers and that carriers be barred from disconnecting the local telephone service of Lifeline subscribers for nonpayment of long distance charges.^{12/} NTIA agrees that

9/ 1996 Act § 254(c)(1)(A)-(D).

10/ See Reply Comments of the National Telecommunications and Information Administration, Federal-State Joint Board on Universal Service, CC Docket No. 96-45, at 7 (filed June 12, 1996) (hereinafter NTIA Reply Comments).

11/ See 1996 Act § 254(c)(2). See also id. § 706(a) (requiring the Federal and State regulators to encourage deployment of advanced telecommunications capabilities to all Americans).

12/ Recommended Decision ¶¶ 384-387. We nonetheless agree that carriers ought to be able to disconnect local service for nonpayment of long distance charges if a low-income household does not agree to subscribe to a toll restriction or toll limitation service (made available at a subsidized rate). See, e.g., Comments of Ameritech at 14.

NTIA did not support, as the Joint Board suggests, making caller ID services available to low-income households at reduced rates. Recommended Decision ¶ 393. Rather, we favored including within the Federally-defined universal service package certain

(continued...)

these initiatives are crucial to addressing one of the principal reasons why low-income households lack telephone service -- their inability to control long distance usage.

Because NTIA appreciates the importance of telecommunications services to small businesses and because we do not wish to restrict -- even inadvertently -- access to those services to such businesses, we do not oppose Commission adoption of the Joint Board's recommendation. At the same time, however, the Joint Board appears to understand the 1996 Act's emphasis on residential customers and has, thus, appropriately limited universal service support to single line business subscribers, who are most likely "mom and pop" or "work-at-home" customers.^{13/}

III. FORWARD-LOOKING COSTS OUGHT TO BE THE BASIS FOR IDENTIFYING ANY AREA AS "HIGH COST" AND AN AREA SHOULD BE CLASSIFIED AS HIGH COST BY COMPARING THE COSTS OF SERVING THAT AREA WITH A NATIONWIDE AVERAGE COST BENCHMARK

NTIA supports important aspects of the Joint Board's recommended mechanism for providing universal service support to

^{12/} (...continued from preceding page)
privacy protections, such as the ability for telephone subscribers to block the passage of their telephone numbers on outgoing calls. See NTIA Reply Comments, *supra* note 10, at 7. We urge the Commission to adopt this recommendation.

^{13/} See, e.g., 1996 Act § 254(c)(1)(B). In deciding whether to include a service or feature in the Federally-defined universal service package, the Commission should consider whether that feature or service has "been subscribed to by a substantial majority of residential customers."

high cost areas. Most importantly, we agree that the identification of an area as "high cost" should be based on forward-looking costs and should not be based on the costs reported by the firms serving or seeking to serve that area. As NTIA noted in our earlier reply comments, linking high cost funding with company-reported costs tends to weaken a serving firm's incentives to minimize capital and operating costs.^{14/}

The Joint Board recommends that the amount of high cost support should equal the difference between the costs of serving a particular area (determined by some proxy) and a nationwide average revenue per line -- defined as "the sum of the revenue generated by local, discretionary, access services and others as found appropriate divided by the number of loops served."^{15/} NTIA has several reservations about this formula. First, the very notion of high cost support implies an assessment of the relative costs of providing service to different areas. Thus, including revenues in a formula to determine high cost support appears irrelevant and, therefore, inappropriate.

^{14/} NTIA Reply Comments, supra note 10, at 16. NTIA will continue to evaluate the suitability of various "proxy" models for estimating service costs as the discussions about those models move forward.

^{15/} Recommended Decision ¶ 310 (footnotes omitted). "Discretionary services include services that are added on to basic local service, e.g., call waiting, call forwarding or caller ID." Id. ¶ 310 n.1002.

Moreover, although a nationwide average revenue benchmark "would encourage carriers to market and introduce new services in high cost areas,"^{16/} it would also unduly burden carriers in high cost, rural areas by forcing them to provide the same services offered by firms serving (on average) more affluent, more densely populated areas, even though there are likely to be significant differences between the respective areas in terms of, for example, market demand or consumer disposable income. If lack of customer demand limits the rural carrier's ability to market new services, that carrier will face a reduction in its high cost support for the provision of basic service, through no fault of its own and for no good reason.^{17/}

The Board's proposed average revenue benchmark is also problematic because it includes monies derived from services, e.g., discretionary services, that are not included within the Federally-defined universal service package. If revenues are to be used in determining Federal universal service support, they ought to be limited to revenues earned in providing the services

^{16/} Id. ¶ 313. We also recognize that a rational firm should have an incentive to introduce new services without such prompting if the offering of such services would increase firm profits.

^{17/} See id. ("those carriers that fail to introduce services or who lose customers to their competitors will not receive universal service support funds to replace the foregone revenues"). If the Commission decides to use an average revenue benchmark for determining high cost support, it could mitigate potential unfairness to high cost carriers by employing a geographically narrower benchmark, such as statewide average revenues per line.

to be supported -- those contained in the basic universal service package. Relying on non-universal services to generate revenues to offset the costs of offering the universal service package appear to conflict with Congress' goal of eliminating implicit subsidies as a means of financing universal service.^{18/}

Because of the problems with using a revenue benchmark to calculate, in part, high cost support, NTIA recommends that the Commission classify an area as "high cost" if the costs of serving that area (as determined by some methodology exogenous to the serving firm or firms) exceed 130 percent of the nationwide average costs. In such cases, eligible companies serving those areas would be entitled to receive, for each customer served, an amount from the Federal universal service fund equal to the difference between their costs (exogenously determined) and 130 percent of the nationwide average.^{19/}

^{18/} See, e.g., H.R. Conf. Rep. No. 104-458, 104th Cong., 2d Sess. (1996), reprinted in 1996 U.S.C.C.A.N. 124, 131 (hereinafter Conference Report). See also Comments of US West, Inc. at 29-30.

^{19/} See NTIA Reply Comments, supra note 10, at 18-19. Under this approach, if average service costs nationwide are \$30 per line per month, the Federal universal service fund would provide high cost support to all areas where service costs exceed \$39 per line per month.

Some may argue that a Federal high cost support program that focuses exclusively on relative costs may not guarantee affordable rates in high cost areas. In NTIA's view, affordability can best be assured -- in low cost and high cost areas alike -- by identifying the specific households that need help in paying for adequate telephone service and targeting support to those households. See id. at 18 n.51. States are
(continued...)

IV. CONTRIBUTIONS TO THE FEDERAL UNIVERSAL SERVICE FUND SHOULD
BE BASED ON A FIRM'S COMBINED INTERSTATE AND INTRASTATE
REVENUES

NTIA strongly supports the Joint Board's recommended approach for generating the funds needed to ensure the affordability of the Federally-defined universal service package. Thus, all providers of interstate telecommunications services should be required to contribute to the Federal universal service fund.^{20/} We also agree with the Board's recommendation that contributions to the Federal fund should be generated by a percentage surcharge on an obligated firm's gross revenues, minus payments to other carriers.

That surcharge should apply to a contributing firm's combined interstate and intrastate gross revenues, rather than interstate revenues alone. It must be recalled, after all, that the bulk of the Federally-defined universal service package includes services and features that have long been considered intrastate in nature and regulated accordingly. The universal availability of that service package, moreover, ostensibly benefits all users of the nation's telecommunications system, not merely those who happen to make interstate calls. If, as Congress mandated, one of the goals of universal service is to

^{19/} (...continued from preceding page)
also free to ensure affordability by providing additional support to high cost areas through separate, independently-funded State programs. Id. at 19. See also 1996 Act § 254(f).

^{20/} Recommended Decision ¶¶ 784-791.

ensure "equitable and nondiscriminatory contribution[s] to the preservation and advancement of universal service,"^{21/} the burden of supporting those universally beneficial services should not be borne solely by interstate revenues and the customers that generate them.^{22/}

Furthermore, basing universal service contributions on interstate revenues alone would cause substantial compliance and enforcement problems. Service providers would have to develop mechanisms for identifying and separating interstate revenues from other revenues, increasing their costs and potentially subjecting them to accounting rules and regulations they have never faced before.^{23/} More perniciously, companies would have the incentive to mischaracterize the jurisdictional nature of their revenues to avoid or to minimize their Federal contribution.^{24/} The oversight problem for regulators will

^{21/} 1996 Act § 254(b)(4).

^{22/} NTIA agrees with MCI that, if the Commission decides to finance the Federal universal service fund solely from interstate revenues, the Commission should substantially reduce the size of that fund and leave it to the States to establish supplementary universal service support funds financed by intrastate revenues. See Comments of MCI Telecommunications Corp. at 8.

^{23/} Recommended Decision ¶ 816. In some cases, firms may find it simpler to incur the costs of corporate reorganization to separate structurally their provision of interstate and intrastate services. Staff Subcommittee on Communications of the National Association of Regulatory Utility Commissioners, The Revenue Base for Federal Universal Service Support 25 (Dec. 8, 1996) (hereinafter NARUC Staff Report).

^{24/} Recommended Decision ¶ 816; NARUC Staff Report, supra note 23, at 25.

likely become even greater in the future if, as many expect, companies begin offering packages of interstate and intrastate communications services.^{25/}

Finally, recovering universal service contributions entirely from interstate services would increase the price of those services (by the amount of the surcharge), thereby reducing demand and, perhaps, deterring firms from investing in interstate transmission facilities or providing interstate services. Additionally, because the elasticity of demand for interstate services is significantly higher than the demand elasticities of many intrastate services, the distorting effect on social welfare of a surcharge on interstate revenues will be substantially larger than if the surcharge were applied to a broader revenue base or to a broader range of services, the demand for some of which are less sensitive to fluctuations in price. For all of these reasons, basing Federal universal service contributions on combined revenues is desirable as a matter of policy.

Such an approach is also consistent with the intent and structure of the universal service provisions of the 1996 Act.^{26/} Although that Act specifies that providers of interstate communications service must contribute to the Federal universal service, it is silent about which of their revenues are

^{25/} See Comments of MCI Telecommunications Corp. at 11.

^{26/} See, e.g., Comments of US West, Inc. at 16-21.

subject to that obligation.^{27/} It has been argued that the 1996 Act did not disturb the traditional interstate/intrastate division of power between the Commission and State regulators. In fact, however, the Act effects a series of fundamental changes in Federal/State authority with respect to universal service.

Rather than leaving the definition of universal service solely to the States, as has been the case historically, the 1996 Act requires the Commission to adopt a new national definition of the services to be made universally available and affordable.^{28/} Congress plainly intended the Commission-adopted plan to be the nation's threshold universal service plan, because it barred States from adopting programs that interfere with the Federal plan.^{29/} Congress also required States to designate essential telecommunications carriers (ETCs) to provide the Federally-defined universal service package in unserved areas and forbade States from designating fewer than two ETCs in many other markets.^{30/}

^{27/} 1996 Act § 254(d). See also Conference Report, supra note 18, at 131.

^{28/} 1996 Act § 254(a)(2). In so doing the Commission must, of course, consult with State regulators via a Federal-State Joint Board.

^{29/} Id. § 254(f).

^{30/} Id. § 214(e)(3).

In other words, although the 1996 Act does not interfere with State prerogatives to provide additional universal service support to their citizens, it creates an explicit Federal role in crafting universal service policy to ensure a nationwide minimum level of universal service and universal service support. Because Congress gave the Commission new authority over the definition and provisioning on universal service, it is reasonable to conclude that Congress intended to give the Commission latitude to fund the Federal universal service program in a sensible and sustainable manner that promotes the larger procompetitive purposes of the 1996 Act.

Funding the Federal universal service program with a surcharge on intrastate and interstate revenues does not impair States' authority over the "charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communications."^{31/} States retain their power to determine the rates at which carriers offer intrastate services, as well as the terms and conditions on which they make those services available.^{32/} There is, in short, nothing in either the Communications Act or the Telecommunications Act of 1996 that bars the Commission from funding universal service by a surcharge

^{31/} 47 U.S.C. 152(b).

^{32/} See NARUC Staff Report, supra note 23, at 22 ("[t]here may be a difference between the setting of intrastate rates and conditions of service, which can only be accomplished by the states, and the collection of funds to finance universal service programs").

on combined interstate and intrastate revenues.^{33/} There are, as discussed above, strong policy considerations in favor of such an approach.

V. THE JOINT BOARD'S RECOMMENDATIONS PROVIDE A FRAMEWORK FOR ENSURING THAT OUR NATION'S SCHOOLS, LIBRARIES, AND RURAL HEALTH CARE PROVIDERS ARE ABLE TO HAVE AFFORDABLE ACCESS TO INFORMATION TECHNOLOGY

A. Schools and Libraries

NTIA further commends the Joint Board for its stance on schools and libraries as set forth in the Recommended Decision.

As Vice President Gore observed:

I am very pleased that the FCC's Federal-State Joint Board on universal service has today unanimously voted to respond to President Clinton's call to give every classroom and library in the country affordable access to the information superhighway.^{34/}

We are pleased that the Joint Board embraced many of the basic tenets of the Administration's E-rate plan.^{35/} The provision of substantial discounts for all schools and libraries, with deeper

^{33/} By the same token, if a State wishes to establish its own universal service program, the 1996 Act would not preclude it from funding such a program by imposing a surcharge on all revenues earned by contributing firms within that State. The important difference is that while the Commission can reach all domestic revenues to fund a universal service program for the entire country, the State of Iowa, for example, should be limited to the revenues generated by communications that originate in Iowa.

^{34/} Statement of Vice President Gore, released November 7, 1996, at 1.

^{35/} Further Comments of the National Telecommunications and Information Administration, Federal-State Joint Board on Universal Service, CC Docket No. 96-45 (filed Oct. 10, 1996) (hereinafter NTIA Further Comments).

reductions for entities in low-income and/or high-cost areas, is a major step toward ensuring that all schools and libraries have access to the Information Age. We likewise applaud the Joint Board's definition of universal service for schools and libraries that includes access to the Internet and e-mail, competitive bidding as the backbone of the procurement process, and encourages buying coalitions, as well as neutrality with respect to technology and competition.

While we are encouraged that the overall framework of the Recommended Decision's approach will achieve many of the Administration's goals, we believe that any final E-rate plan adopted by the Commission should be in consonance with the following policy recommendations.

1. Technology and curriculum should be integrated

As many educators have emphasized throughout this process, educational objectives and curricula should drive the use of bandwidth, transmission speed, and functionalities. The Joint Board has addressed this concern by adopting three self-certification requirements that seem reasonable and not overly burdensome.^{36/} In turn, the Joint Board urges the Commission

^{36/} These requirements include: (1) certify to the administrator that they have adopted a plan for securing access to all of the necessary supporting technologies needed to effectively use the services purchased under § 254(h) of the 1996 Act; (2) send a description of the services they desire to the fund administrator, so that the description of services can be posted
(continued...)

to adopt these requirements in order to demonstrate compliance with the 1996 Act's "bona fide request" clause in section 254(h)(1)(B). We concur.

In response to suggestions from the education community, the Administration has promoted four goals as set forth in the President's Technology Literacy Challenge.^{37/} These include ensuring that:

- All teachers have the proper training and support they need to help students learn how to use computers and the information superhighway;
- All teachers and students will have modern multi-media computers in their classrooms;
- Every classroom will be connected to the information superhighway; and
- Effective software and on-line learning resources will be an integral part of every school's curriculum.

The Administration already has begun initiatives designed to achieve these goals. One is the Department of Education's Technology Literacy Challenge Fund, which seeks to provide funds on a matching basis to states for teacher training and curriculum-based on-line learning, as well as electronic access

^{36/} (...continued from preceding page)
for all potential competing service providers; and (3) submit written requests to their chosen service providers for services eligible for § 254(h) discounts, including certification of their eligibility for support and agreement to abide by FCC rules. See Recommended Decision ¶¶ 599-604, 630.

^{37/} See, e.g., U.S. Department of Education, Getting America's Students Ready for the 21st Century: Meeting the Technology Literacy Challenge at 5, 11.

to the NII for classrooms. Matching grants also form the basis for NTIA's Telecommunications and Information Infrastructure Assistance Program, which helps schools, libraries, and other non-profit entities to effectively access the information superhighway.

The Recommended Decision addresses the third, crucial element of this strategy. It recognizes that schools and libraries require inside as well as external connectivity to the Information Superhighway and that affordable access to the Internet is the key to broadening all children's learning. Although educational approaches may vary, many educators believe that telecommunications technologies and access to the many content-rich sources of information now available on the Internet are critical to continuing and maintaining the level of educational excellence in this country.^{38/} Moreover, these technologies provide comparatively inexpensive access to resources that are unavailable to or not affordable for many of

^{38/} Recent empirical studies show that when prudently applied, technology -- including Internet access -- leads to important performance gains for students. For example, the Center for Applied Special Technology (CAST) found in a study of 500 elementary school students in seven urban school districts that the Internet can help students become independent critical thinkers. CAST, The Role of Online Communications in Schools: A National Study, 1996. More broadly, a Stanford Research Institute study funded by the Department of Education concluded that the use of technology results in educational gains regardless of age, race, parental income or other factors. Barbara Means and Kerry Olson, Restructuring Schools with Technology: Challenges and Strategies (Menlo Park, CA: SRI International, November 1995).

our low-income, isolated and smaller schools. We urge the Commission to develop these recommendations in full.

2. Educational access to technology should be prudently supported and periodically reviewed

Technological change is occurring at a breakneck pace, with new research and learning tools for educators, students, and parents being introduced almost daily. As the Internet evolves (e.g., the emergence of Internet II), policymakers need to ensure that educational capabilities are kept current and include commercially-proven services and technologies. Such updating should be addressed by the Joint Board within a reasonable period of time, beginning at the latest with the Board's proposed re-convening on January 1, 2001 and resolved by no later than five years from now.^{39/}

3. Schools and libraries must receive technical and informational assistance to ensure their successful participation in the new universal service support system

As a general proposition, schools and libraries will need help to take full advantage of the support system permitted by the 1996 Act and envisioned by the Joint Board. Many of these entities will find themselves inadequately prepared to make the most favorable procurement deal available to them under the new universal service framework. Integral support functions include, among others, technology assistance, electronic posting of

^{39/} See 1996 Act § 254(c)(1).